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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DAVID FALCONER, SHALINI PERIYALWAR,
KOON HOO TEO, and MO-HAN FONG

Appeal 2009-005730
Application 10/813,009
Technology Center 2600

Before KENNETH W. HAIRSTON, MAHSHID D. SAADAT, and BRADLEY W. BAUMEISTER, *Administrative Patent Judges*.

SAADAT, *Administrative Patent Judge*.

DECISION ON APPEAL[1]

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[1] The two month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304 or for filing a request for rehearing as recited in 37 C.F.R. § 41.52, begins to run from the "MAIL DATE" (paper delivery mode) or the "NOTIFICATION DATE" (electronic delivery mode) shown on the PTOL-90A cover letter attached to this decision.

Appellants appeal under 35 U.S.C. § 134(a) from a Final Rejection of claims 1-4, 7, 9-11, and 18-23, which constitute all the claims pending in this application. Claims 5, 6, and 12-17 are withdrawn from consideration and claim 8 is cancelled. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

STATEMENT OF THE CASE

Appellants' invention relates to partner relay systems and methods for wireless communication systems in which signal relaying is performed by a pair of partner relays. Signals received from a base station are translated by a first one of the pair of partner relays to a different transmission resource for communication between the pair of partner relays, and then upon reception by a second of the pair of partner relays, the signal is translated back to the original transmission resource and re-transmitted towards a receiver (Abstract).

Claim 1, which is illustrative of the invention, reads as follows:

> 1. A partner relay system for use in a communication system comprising a first transceiver and at least one second transceiver in which forward link transmissions occur in a downlink direction from the first transceiver to the at least one second transceiver and reverse link transmissions occur in an uplink direction from the at least one second transceiver to the first transceiver, the partner relay system comprising:
>
> a first relay adapted to receive a first signal in the downlink direction on a first wireless transmission resource, perform a first signal translation on the first signal to a second transmission resource, and re-transmit the first signal in the downlink direction on the second wireless transmission resource;
>
> a second relay in a spaced arrangement from said first relay adapted to receive the first signal in the downlink

> direction on the second wireless transmission resource from the first relay, perform a second signal translation to re-translate the first signal to the first wireless transmission resource, and re-transmit the first signal in the downlink direction;
>
> wherein the first wireless transmission resource is a transmission resource allocated for forward link transmissions from the first transceiver, and the second wireless transmission resource is a transmission resource allocated for reverse link transmissions to the first transceiver.

The Examiner relies on the following prior art in rejecting the claims:

Tirabassi	US 6,400,925 B1	Jun. 4, 2002
Yarkosky	US 6,895,218 B2	May 17, 2005
Talaie	US 6,985,716 B2	Jan. 10, 2006

Claims 1-3, 7, 10, 11, 19, and 21-23 stand rejected under 35 U.S.C. § 102(e) as anticipated by Yarkosky.

Claim 4 stands rejected under 35 U.S.C. § 103(a) as obvious over Yarkosky in view of Talaie.

Claims 9, 18, and 20 stand rejected under 35 U.S.C. § 103(a) as obvious over Yarkosky in view of Tirabassi.

Rather than repeat the arguments here, we make reference to the Briefs (App. Br. filed Mar. 28, 2008, Reply Br. filed Aug 13, 2008) and the Answer (mailed Jul. 10, 2008, correcting and replacing an Answer mailed Jun. 13, 2008) for the respective positions of Appellants and the Examiner. Only those arguments actually made by Appellants have been considered in this decision. Arguments that Appellants did not make in the Briefs have not been considered and are deemed to be waived. *See* 37 C.F.R. § 41.37(c)(1)(vii).

ISSUES

Claims 1 and 22 are independent claims. Claims 2-4, 7, 9-11, and 18-21 depend from claim 1 while claim 23 depends from claim 22. Claims 1 and 22 have similar limitations and, in arguing for the patentability of claim 22, Appellants have referred to the argument for claim 1, but have made no additional substantive argument. For dependent claims 2, 3, 7, 10, 11, 19, and 21, Appellants rely on the arguments made for claim 1 and make no additional substantive argument. For dependent claim 23, Appellants rely on the arguments made for claims 1 and 22 and make no additional substantive argument.

In arguing for the patentability of claim 4, Appellants rely on its dependency from claim 1 and make additional arguments.

Claims 9, 18, and 20 have similar limitations. In arguing for the patentability of claim 9, 18, and 20, Appellants rely on their dependency from claim 1 and make additional arguments that are the same for all three claims.

Therefore, we select claim 1, which is representative of claims 2, 3, 7, 10, 11, 19, and 21-23, claim 4, and claim 9, which is representative of claims 18 and 20, as the representative claims, pursuant to our authority under 37 C.F.R. § 41.37(c)(1)(vii).

The issues are:

Is claim 1 properly rejected under 35 U.S.C. § 102(e) as anticipated by Yarkosky?

Is claim 4 properly rejected under 35 U.S.C. § 103(a) as obvious over Yarkosky in view of Talaie?

Is claim 9 properly rejected under 35 U.S.C. § 103(a) as obvious over Yarkosky in view of Tirabassi?

FINDINGS OF FACT (FF)

1. Yarkosky discloses a wireless cellular service system in which a base transceiver station (BTS) transmits a downlink signal on a downlink frequency (DF) to a propagation relay (PR) (Figs. 3, 5; col. 4, ll. 60-62).

2. Yarkosky discloses that the PR receives the downlink signal on the DF, converts it to an intermediate downlink frequency (IDF), and transmits the downlink signal on the IDF to a mobile station interface port (MSIP) (Figs. 3, 5; col. 4, ll. 62-67).

3. Yarkosky discloses that the MSIP receives the downlink signal on the IDF, converts it to the DF, and transmits the downlink signal on the DF to a mobile station (MS) (Figs. 3, 5; col. 4, l. 67 – col. 5, l. 5).

4. Yarkosky discloses that the MS receives the downlink signal on the DF (Figs. 3, 5; col. 5, ll. 5-6).

5. Yarkosky discloses that the MS transmits an uplink signal on an uplink frequency (UF) to the MSIP (Figs. 4, 5; col. 5, ll. 22-24).

6. Yarkosky discloses that the MSIP receives the uplink signal on the UF, converts it to an intermediate uplink frequency (IUF), and transmits the uplink signal on the IUF to the PR (Figs. 4, 5; col. 5, ll. 25-28).

7. Yarkosky discloses that the PR receives the uplink signal on the IUF, converts it to the UF and transmits the uplink signal on the UF to the BTS (Figs. 4, 5; col. 5, ll. 28-31).

8. Yarkosky discloses that the BTS receives the uplink signal on the UF (Figs. 4, 5; col. 5, ll. 31-32).

PRINCIPLES OF LAW

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of Cal.*, 814 F.2d 628, 631 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the . . . claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236 (Fed. Cir. 1989).

> Section 103 forbids issuance of a patent when "the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains."

KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 406 (2007).

ANALYSIS

Claim 1

In arguing for the patentability of claim 1 over Yarkosky, Appellants focus on the final clause of claim 1, which reads:

> wherein the first wireless transmission resource is a transmission resource allocated for forward link transmissions from the first transceiver, and the second wireless transmission resource is a transmission resource allocated for reverse link transmissions to the first transceiver.

Appellants argue that the limitation recited by this clause is absent from Yarkosky (App. Br. 6; Reply Br. 2-3). The essence of Appellants' argument is that the claim requires that the transmissions from the first relay (e.g., first partner relay 22 in Fig. 4) to the second relay (e.g., second partner

relay 24 in Fig. 4) use the same wireless transmission resource as transmissions from the first relay (e.g., first partner relay 22 in Fig. 4) to the first transceiver (e.g., BS 20 in Fig. 4). The Examiner contends that Appellants are reading more into the claim than is recited in the claim, and the Examiner interprets Appellants' argument as contending that the first signal is being reverse linked (Ans. 8).

We find that Appellants accurately characterize the limitation of the final clause of claim 1 when they state

> [C]laim 1 recites that the second wireless transmission resource used for retransmitting the first signal in a downlink direction is a transmission resource intended to be used for reverse link transmission, but is being used for forward link transmissions that occur in a downlink direction from the first transceiver to the at least one second transceiver. . . .
>
> . . . [T]he transmission resource allocated for reverse link transmissions is used to "re-transmit the first signal in the downlink direction on the second wireless transmission resource."

(Reply Br. 2-3 (emphases omitted)).

Reading all but the final clause of claim 1 on Yarkosky's disclosure, we find the following:

- The first transceiver reads on BTS (FF 1).
- The at least one second transceiver reads on MS (FF 4).
- The forward link transmissions in a downlink direction read on transmissions from BTS in the direction of MS (FF 1-4).
- The reverse link transmissions in an uplink direction read on transmissions from MS in the direction of BTS (FF 5-8).
- The first relay reads on PR (FF 2).

- The first signal in the downlink direction reads on the downlink signal (FF 1).
- The first wireless transmission resource reads on DF (FF 1, 2).
- The second wireless transmission resource reads on IDF (FF 2, 3).
- The second relay reads on MSIP (FF 3).

The final clause of claim 1 requires that the first wireless transmission resource (Yarkosky's DF) be allocated for downlink transmissions from the first transceiver (Yarkosky's BTS) and that the second wireless transmission resource (Yarkosky's IDF) be a wireless transmission resource allocated for reverse link transmissions to the first transceiver, which reads on Yarkosky's UF (FF 7, 8). Hence, Yarkosky only meets the limitations of the last clause of claim 1 if Yarkosky discloses that IDF and UF are the same. The Examiner has not identified, nor do we find, any such disclosure in Yarkosky. Independent claim 22 includes similar limitation related to the first and the second wireless transmissions which we found to be absent from Yarkosky, *supra*. Accordingly, we find that Yarkosky does not anticipate claims 1 and 22, and as such, that claim 1 and claims 2, 3, 7, 10, 11, 19, and 21-23 are improperly rejected.

Claim 4

Claim 4 depends from and recites all the limitations of claim 1, including the limitation found to be absent from Yarkosky, *supra*. We find nothing in Talaie that cures this deficiency in Yarkosky. Accordingly, we find that claim 4 is improperly rejected.

Claim 9

Claims 9, 18, and 20 depend from and recite all the limitations of claim 1, including the limitation found to be absent from Yarkosky, *supra*.

We find nothing in Tirabassi that cures this deficiency in Yarkosky. Accordingly, we find that claims 9, 18, and 20 are improperly rejected.

CONCLUSION

On the record before us, we find that Yarkosky does not disclose all of the limitations of claims 1 and 22. Furthermore, neither Talais nor Tirabassi cures the deficiency in Yarkosky. Accordingly, claims 1-4, 7, 9-11, and 18-23 were improperly rejected.

ORDER

The decision of the Examiner to reject claims 1-4, 7, 9-11, and 18-23 is reversed.

REVERSED

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